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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,254	06/19/2003	Myron J. Block	ORR-143	6696
959	7590	04/21/2005	EXAMINER	
LAHIVE & COCKFIELD, LLP. 28 STATE STREET BOSTON, MA 02109			STAFIRA, MICHAEL PATRICK	
			ART UNIT	PAPER NUMBER
			2877	

DATE MAILED: 04/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/601,254

Applicant(s)

BLOCK, MYRON J.

Examiner

Michael P. Stafira

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on amendment filed 2/1/2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-19 and 21-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-15,17-19,21-30 and 32 is/are rejected.
- 7) ☒ Claim(s) 16,31 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

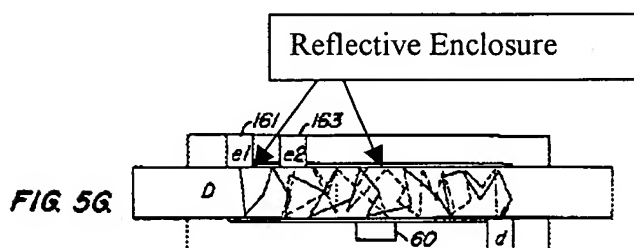
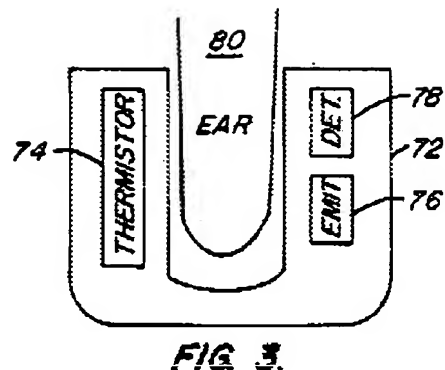
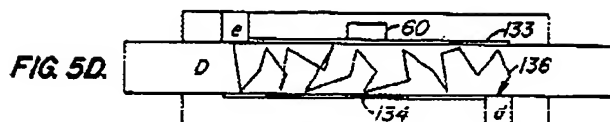
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 4, 12-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Chin et al. ('223).

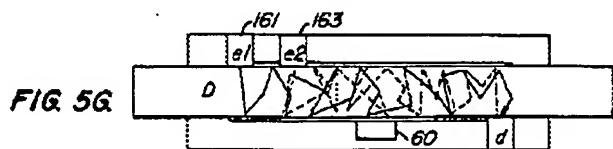
Claim 1

Chin et al. ('223) discloses providing a source of illuminating radiation (Fig. 5D, Ref. e) for illuminating a sample (Fig. 3, Ref. 80); arranging said illumination source (Fig. 5D, Ref. e) adjacent to a reflective enclosure (Fig. 5d, Ref. 133) that at least partially encloses said sample. (See Fig. 3); illuminating said sample with radiation from said illumination source (Fig. 5D, Ref. 136); and detecting radiation emerging from said sample with a detector (Fig. 5D, Ref. d). Chin et al. ('223) further discloses at least one of said plurality of radiation sources Fig. 5G, Ref. 163) is located within said reflective enclosure (See Fig. 5G)



Claim 2

Chin et al. ('223) discloses the source of illuminating radiation comprises a plurality of radiation sources (Fig. 5G, Ref. 161, 163).



Claim 4

The reference of Chin et al. ('223) further discloses at least two of said radiation sources are located within said reflective enclosure and said radiation sources are located radially relative to said sample (See Fig. 5G).

Claim 12

Chin et al. ('223) discloses the sample contains a bodily fluid (Fig. 3, Ref. 80).

Claim 13

Chin et al. ('223) further discloses the testing apparatus is adapted for in vivo non-invasive testing of a material carried in said bodily fluid (See Fig. 3).

Claim 14

The reference of Chin et al. ('223) further discloses the sample is a finger that is illuminated and from which said radiation is detected (Col. 5, lines 54-56).

Claim 15

Chin et al. ('223) further discloses the reflective enclosure only partially encloses said finger in a radial direction, with an opening approximately equal in size to the width of said finger (Col. 6, lines 59-63).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chin et al. ('223) as applied to claims above, and further in view of Seeker ('784).

Claim 5

Chin et al. ('223) discloses at least two radiation sources are located within the reflective enclosure (See Fig. 5G; Ref. 161, 163)

Chin et al. ('223) substantially teaches the claimed invention except that it does not show an at least two radiation sources axially relative to the sample. Seeker ('784) shows that it is known to provide two radiation sources (Fig. 1, Ref. 7, 9) axially relative to the sample (See Fig. 1) for an oxygen saturation measuring apparatus. It would have been obvious to combine the device of Chin et al. ('223) with the radiation sensors axially relative to the sample of Seeker ('784) for the purpose of providing a uniform illumination over the sample, therefore increasing the sensitivity of the measurement.

Claim 6

Chin et al. ('223) discloses the claimed invention except for the sources are miniature incandescent lamps. It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine Chin et al. ('223) with the miniature incandescent lamps since it was well known in the art that the using incandescent lamps use a variety of wavelengths, therefore increasing the sensitivity of the measurement.

Claim 7

Chin et al. ('223) substantially teaches the claimed invention except that it does not show the detector is a plurality of detector units. Seeker ('784) shows that it is known to provide a plurality of detector units (Fig. 2, Ref. 19, 23) for an oxygen saturation measuring apparatus. It would have been obvious to combine the device of Chin et al. ('223) with the plurality of detectors of Seeker ('784) for the purpose of providing multiple detection systems over a wider area, therefore allowing for a more complete measurement of an area in less time.

5. Claims 8-11,17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chin et al. ('223) as applied to claims above, and further in view of Branigan et al. ('717).

Claim 8

Chin et al. ('223) substantially teaches the claimed invention except that it does not show the enclosure is a cylinder open at both ends. Branigan et al. ('717) shows that it is known to provide a cylinder open at both ends (See Fig. 3) for an oxygen saturation measurement apparatus. It would have been obvious to combine the device of Chin et al. ('223) with the cylinder opening of Branigan et al. ('717) for the purpose of providing a sample to be placed at either end of the sensor, therefore making the ends universal.

Claim 9

Chin et al. ('223) substantially teaches the claimed invention except that it does not show the cylinder encloses the sample. Branigan et al. ('717) shows that it is known to provide a cylinder to enclose the sample (See Fig. 8) for an oxygen saturation measuring apparatus. It would have been obvious to combine the device of Chin et al. ('223) with the cylinder enclosure of Branigan et al. ('717) for the purpose of providing a uniform holder for the optical sources and detector, therefore providing the same distance to the optical elements and decreasing the amount of time needed for calculations.

Claim 10

Chin et al. ('223) further discloses the sample is a fluid (See Fig. 3).

Claim 11

The reference of Chin et al. ('223) further discloses the fluid flows through said cylinder during time of illumination and detection of radiation (See Fig. 3).

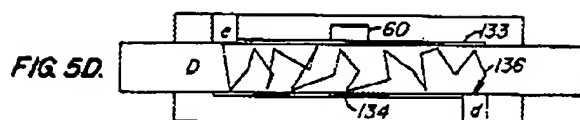
Claim 17

Chin et al. ('223) substantially teaches the claimed invention except that it does not show that the portion of the finger that is illuminated and from which the radiation is detected is a knuckle. Branigan et al. ('717) shows that it is known to provide illumination of the knuckle (See Fig. 9) for an oxygen saturation sensor apparatus. It would have been obvious to combine the device of Chin et al. ('223) with the illumination of the knuckle of Branigan et al. ('717) for the purpose of providing illumination over different parts of the finger, therefore receiving different illumination sensitivity from different areas which give a more uniform measurement.

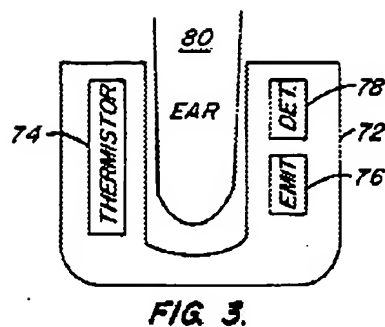
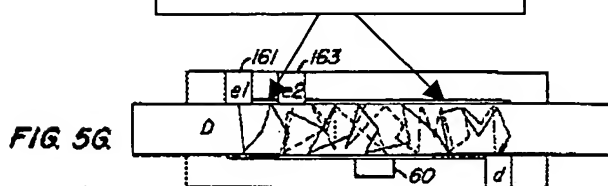
6. Claims 18, 19, 21, 27-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Chin et al. ('223).

Claim 18

Chin et al. ('223) discloses a source (Fig. 5D, Ref. e) of illuminating radiation for illuminating a sample (Fig. 3, Ref. 80), said illumination source (Fig. 5D, Ref. e) being arranged adjacent to a reflective enclosure (Fig. 5D, Ref. 133) that at least partially encloses said sample (See Fig. 3); and a detector (Fig. 5D, Ref. d) for detecting radiation emerging from said sample (See Fig. 3). Chin et al. ('223) further discloses at least one of said plurality of radiation sources (Fig. 5G, Ref. 163) is located within said reflective enclosure (See Fig. 5G).

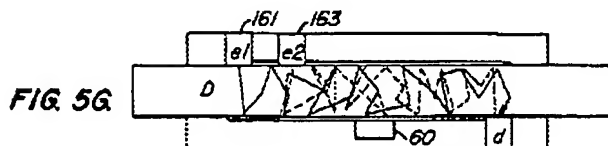


Reflective Enclosure



Claim 19

Chin et al. ('223) discloses the source of illuminating radiation comprises a plurality of radiation sources (Fig. 5G, Ref. 161, 163).



Claim 21

The reference of Chin et al. ('223) further discloses at least two of said radiation sources are located within said reflective enclosure and said radiation sources are located radially relative to said sample (See Fig. 5G).

Claim 27

Chin et al. ('223) discloses the sample contained in a fluid (Fig. 3, Ref. 80).

Claim 28

Chin et al. ('223) further discloses the testing apparatus is adapted for in

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vivo non-invasive testing of a material carried in said bodily fluid (See Fig. 3).

Claim 29

The reference of Chin et al. ('223) further discloses the reflective enclosure (Fig. 5d, Ref. 133) is designed to partially enclose a finger (Col. 5, lines 54-57).

Claim 30

Chin et al. ('223) further discloses the reflective enclosure only partially encloses said finger in a radial direction, with an opening approximately equal in size to the width of said finger (Col. 6, lines 59-63).

7. Claims 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chin et al. ('223) as applied to claims above, and further in view of Seeker ('784).

Claim 22

Chin et al. ('223) discloses at least two radiation sources are located within the reflective enclosure (See Fig. 5G; Ref. 161, 163)

Chin et al. ('223) substantially teaches the claimed invention except that it does not show an at least two radiation sources axially relative to the sample. Seeker ('784) shows that it is known to provide two radiation sources (Fig. 1, Ref. 7, 9) axially relative to the sample (See Fig. 1) for an oxygen saturation measuring apparatus. It would have been obvious to combine the device of Chin et al. ('223) with the radiation sensors axially relative to the sample of Seeker ('784) for the purpose of providing a uniform illumination over the sample, therefore increasing the sensitivity of the measurement.

Claim 23

Chin et al. ('223) discloses the claimed invention except for the sources are miniature incandescent lamps. It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine Chin et al. ('223) with the miniature incandescent lamps since it was well known in the art that the using incandescent lamps use a variety of wavelengths, therefore increasing the sensitivity of the measurement.

Claim 24

Chin et al. ('223) substantially teaches the claimed invention except that it does not show the detector is a plurality of detector units. Seeker ('784) shows that it is known to provide a plurality of detector units (Fig. 2, Ref. 19, 23) for an oxygen saturation measuring apparatus. It would have been obvious to combine the device of Chin et al. ('223) with the plurality of detectors of Seeker ('784) for the purpose of providing multiple detection systems over a wider area, therefore allowing for a more complete measurement of an area in less time.

8. Claims 25-26, 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chin et al. ('223) as applied to claims above, and further in view of Branigan et al. ('717).

Claim 25

Chin et al. ('223) substantially teaches the claimed invention except that it does not show the enclosure is a cylinder open at both ends. Branigan et al. ('717) shows that it is known to provide a cylinder open at both ends (See Fig. 3) for an oxygen saturation measurement apparatus. It would have been obvious to combine the device of Chin et al. ('223) with the cylinder opening of Branigan et al. ('717) for the purpose of providing a sample to be placed at either end of the sensor, therefore making the ends universal.

Claim 26

Chin et al. ('223) substantially teaches the claimed invention except that it does not show the cylinder encloses the sample. Branigan et al. ('717) shows that it is known to provide a cylinder to enclose the sample (See Fig. 8) for an oxygen saturation measuring apparatus. It would have been obvious to combine the device of Chin et al. ('223) with the cylinder enclosure of Branigan et al. ('717) for the purpose of providing a uniform holder for the optical sources and detector, therefore providing the same distance to the optical elements and decreasing the amount of time needed for calculations.

Claim 32

Chin et al. ('223) substantially teaches the claimed invention except that it does not show that the portion of the finger that is illuminated and from which the radiation is detected is a knuckle. Branigan et al. ('717) shows that it is known to provide illumination of the knuckle (See Fig. 9) for an oxygen saturation sensor apparatus. It would have been obvious to combine the device of Chin et al. ('223) with the illumination of the knuckle of Branigan et al. ('717) for the purpose of providing illumination over different parts of the finger, therefore receiving different illumination sensitivity from different areas which give a more uniform measurement.

Allowable Subject Matter

9. Claims 16, 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

10. Applicant's arguments filed February 1, 2005 have been fully considered but they are not persuasive.

In applicant's remarks on page 6, the applicant takes the position that the reference of Chin et al. fails to disclose an emitter located in the reflective enclosure. It is the examiner's position that the reference of Chin et al. in Figure G (163) clearly shows an emitter (e2) located in the reflective enclosure with reflective members on both sides of the emitter (e2). Therefore, the reference of Chin et al. clearly reads on applicant's limitation of an emitter in the reflective enclosure and stands rejected in the above paragraphs.

11. In response to applicant's arguments on page 6, the recitation "minimizing the variations in optical pathlengths" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

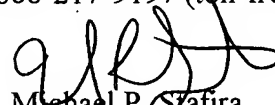
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Stafira whose telephone number is 571-272-2430. The examiner can normally be reached on 4/10 Schedule Mon.-Thurs..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Toatley can be reached on 571-272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Michael P. Stafira
Primary Examiner
Art Unit 2877

April 6, 2005

